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[redacted] 25X1

8 October 1957

[redacted] 25X1

Dear Frank,

I was able to obtain some interesting information from [redacted] 25X1 concerning photography of gas clouds emerging [redacted] 25X1 It was the conclusion of [redacted] 25X1 engineers that there is no quick solution to a special powder load which would reproduce chamber pressures of 18,000 PSI and produce a readily visible gas cloud. However, [redacted] has in the past 25X1 taken many movies of smokeless powder clouds emerging [redacted] using fastex cameras. This procedure is not difficult if the proper technique is used. It appears to me, Frank, that it will have to be a series of trials and errors before you get what you want. The following information was given me by [redacted] 25X1 and one of the photographers, and it is a good point from which to start.

If you are trying to take the movies outside use a black cloth background and try to position the gun and black background to give a back lighting effect. Use Kodak tri-X or Dupont 931 film. The F stop should be F-2. They recommend using a two inch lens and the placing of the camera 3 or 4 feet from the gun. I assumed your fastex is 16mm and 7000 frames per second.

Should you want to try to do this indoors use 6 to 8, 150 watt photospots. Again use the Dupont or Kodak film mentioned above. The setting should be F-4, and a black background should be used. The two inch lens should be employed 3 or 4 feet from the camera.

Enclosed is a photo made of smokeless powder gases. I think that something like that photo is just what you would want. I realize it may be too much trouble, Frank, but the [redacted] boys say it is trial and error, but it can be done 25X1

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I am hoping that I can get the additional minimum variation [redacted] 25X1
ammunition within 6 weeks. I would like to know if the slugs in the ammunition are gilding-coated steel or not. You can determine this by checking the slug with a magnet.

Let me know what success you have using the information in this letter.

Sincerely,

[redacted] 25X1

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